EXTENSION

OFFICE OF THE PRINCIPAL
-JUL
KOVILPATTI
RURAL EXTENSION TRAINING CENTRE

THE FARM AND FARM HOME MAGAZINE June, 1962

THE PICTURE ON THE COVER

Picking tomato calls for closest care. Pick the fruits as soon as they are ready, otherwise ripening of other fruits will be delayed. While picking see that you don't overload your basket lest the fruits get injured. Also, avoid unnecessary trampling of vines. Remember, attractive fruits fetch a better price.

Photo by R. Paul

EXTENSION

THE FARM AND FARM HOME MAGAZINE

Vol. II JUNE, 1962 No. 12

CONTENTS

FARM AND GARDEN CROPS

Monsoon task in mango garden 2

Better cauliflower seedlings this way 3

Make fertilizer work for your rice 6

'Improved Ghana' impresses farmers 8

Make your wasteland pay 17

Hints on pepper growing 25

FARM IMPLEMENT

Puddling with satoon 13

CROP PEST

Time to attend to Gurdaspur borer 22

POULTRY

How to make more money with your laying birds 9

In six years a paying poultry farm 19

SPECIAL FARM FEATURE

Secret of a 6000-pound paddy crop 14

FARM HOME

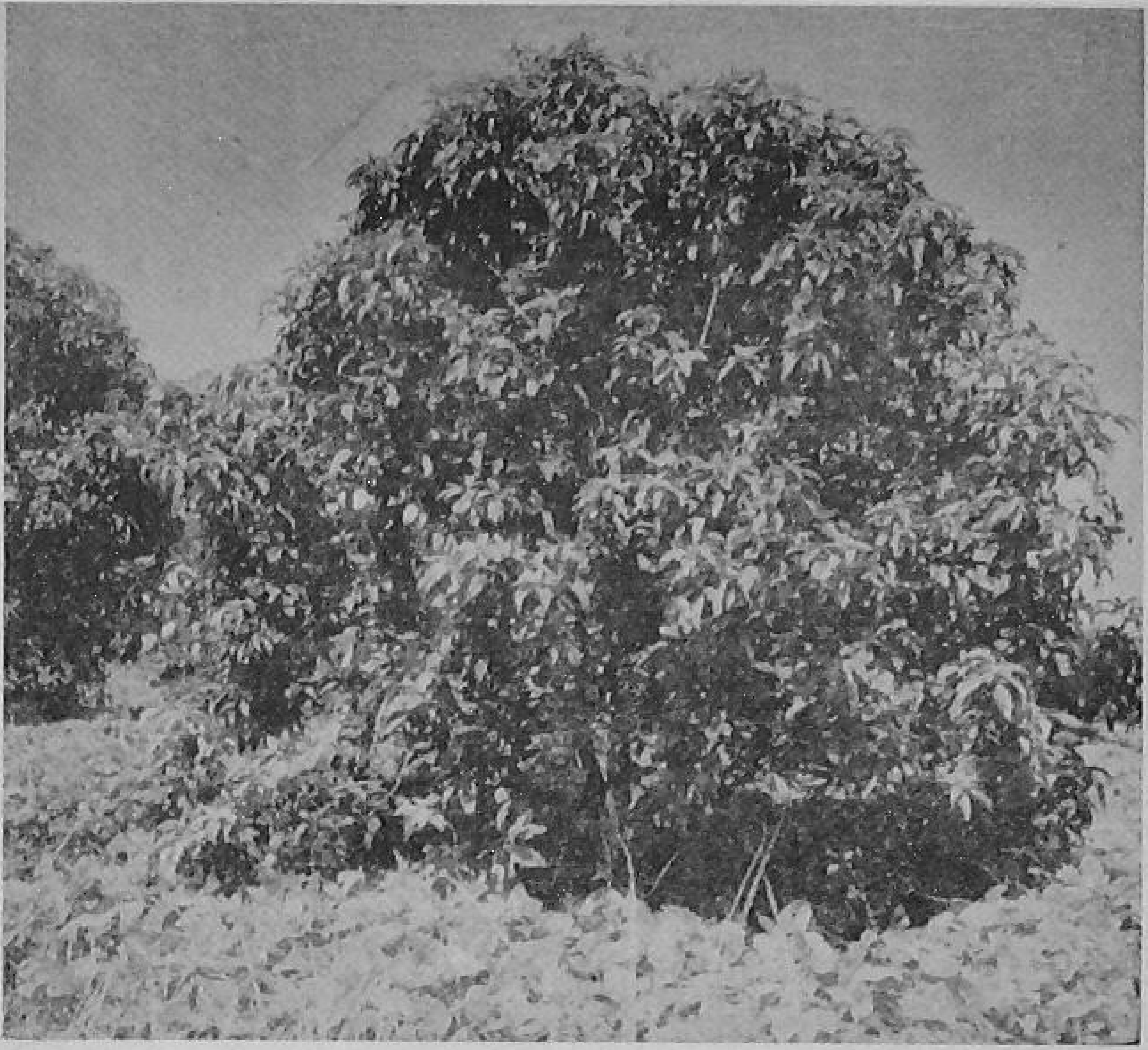
Mango when you order 26

FARM INFORMATION UNIT
DIRECTORATE OF EXTENSION, MINISTRY OF FOOD AND AGRICULTURE, GOVT. OF INDIA, NEW DELHI

Principal Editor	M.G. Kamath
Editor	T.C. Roy
Associates	Lal Karamchandani Sham Govind Ranade Shukla Das
Art Editor	Pratap Deb
Business Manager	R.D. Khanna

Annual Subscription : Rs. 5.50
Single Copy : 50 nP.

Monsoon task IN MANGO GARDENS



A cover crop grown in the orchard at this time will provide enough green manure for your trees

By L. VENKATARATNAM

THIS monsoon, follow these seven tips to get more mangoes and better mangoes from your garden.

Start irrigating the mango trees every fortnight when the fruits are of the size of *amla*. This will not only reduce fruit drop, but will also help develop good juicy fruits.

Hunt out for the parasite *bundha* (Loranthus) plants which appear on the trees about this time. Cut the affected branches with an axe and remove and burn them.

Spread ten cartloads of cattle manure, compost or tank silt on each acre of your orchard.

Plough the orchard well with the receipt of the first monsoon showers and broadcast seeds of green manure crops like *lobia* and sannhemp. Instead of sannhemp you can sow wild indigo, but then you must soak its seed in boiling water for five minutes before sowing. There is one good thing about wild indigo. Once you raise it, you need not sow it again next year, as it reseeds itself and comes up on its own.

Plough in the green manure crop in September. Apply two hundredweights of superphosphate and four hundredweights of potassium sulphate per acre. This dose of course is for a full-bearing mango plantation.

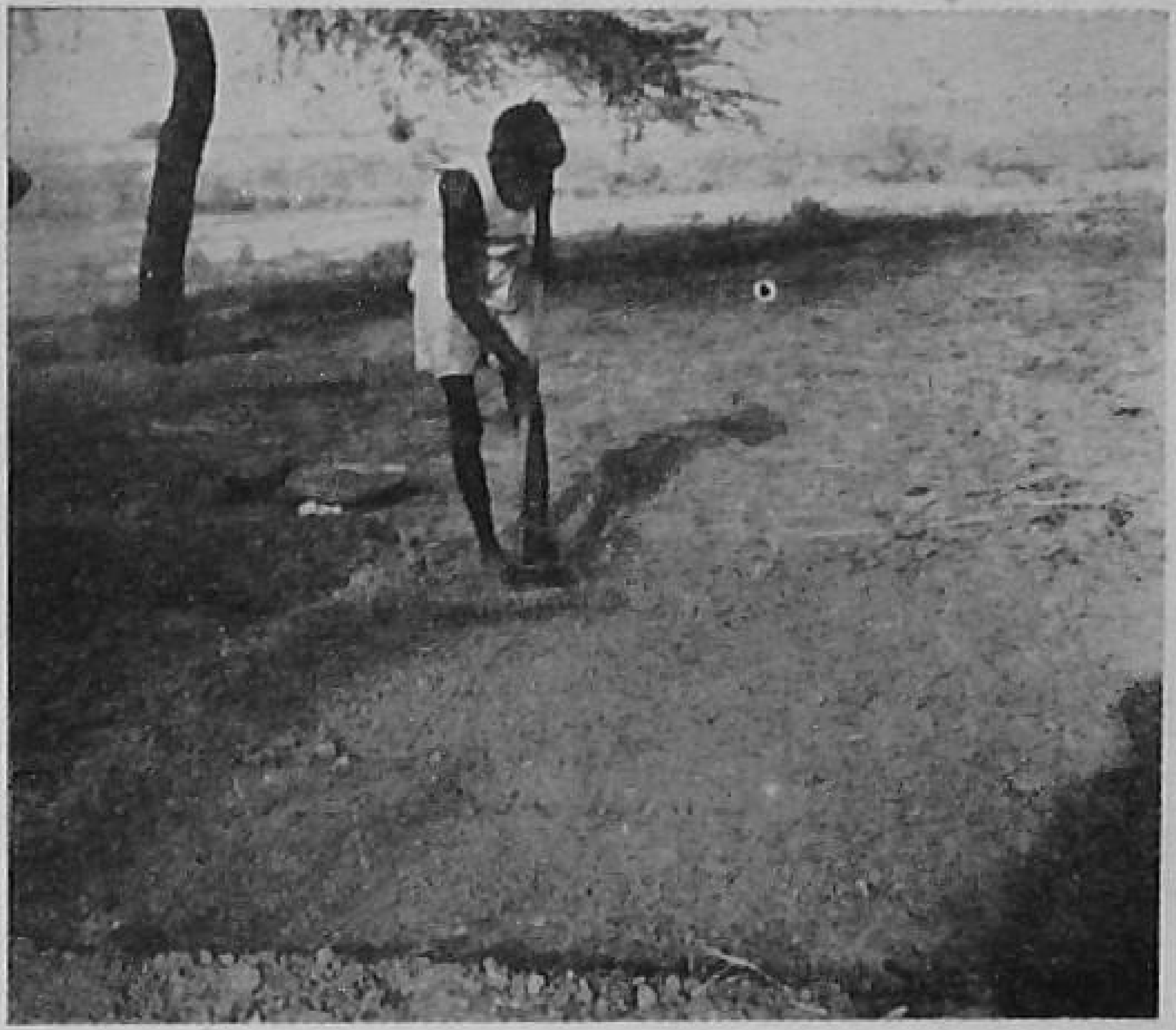
Provide shade to young plants with grass thatching or dry *arhar* stalks.

Raise a shelter belt around the plantation to protect the fruits from sun-burn and hot winds. If you don't have a shelter belt, sow *jantar* or *sewri* around the plantation and along the main irrigation channel, and especially on the southern and western sides, as more hot winds blow from these directions.

BETTER CAULIFLOWER SEEDLINGS THIS WAY

By N. B. MULWANI and L. VENKATARATNAM

RAISE your cauliflower seedlings the following way, and see how healthy and vigorous they grow in a short time. The earlier the seedlings are ready, the earlier you can catch the market and the better the price you can get for your produce. Besides, by following this method you will be saving on seed too.

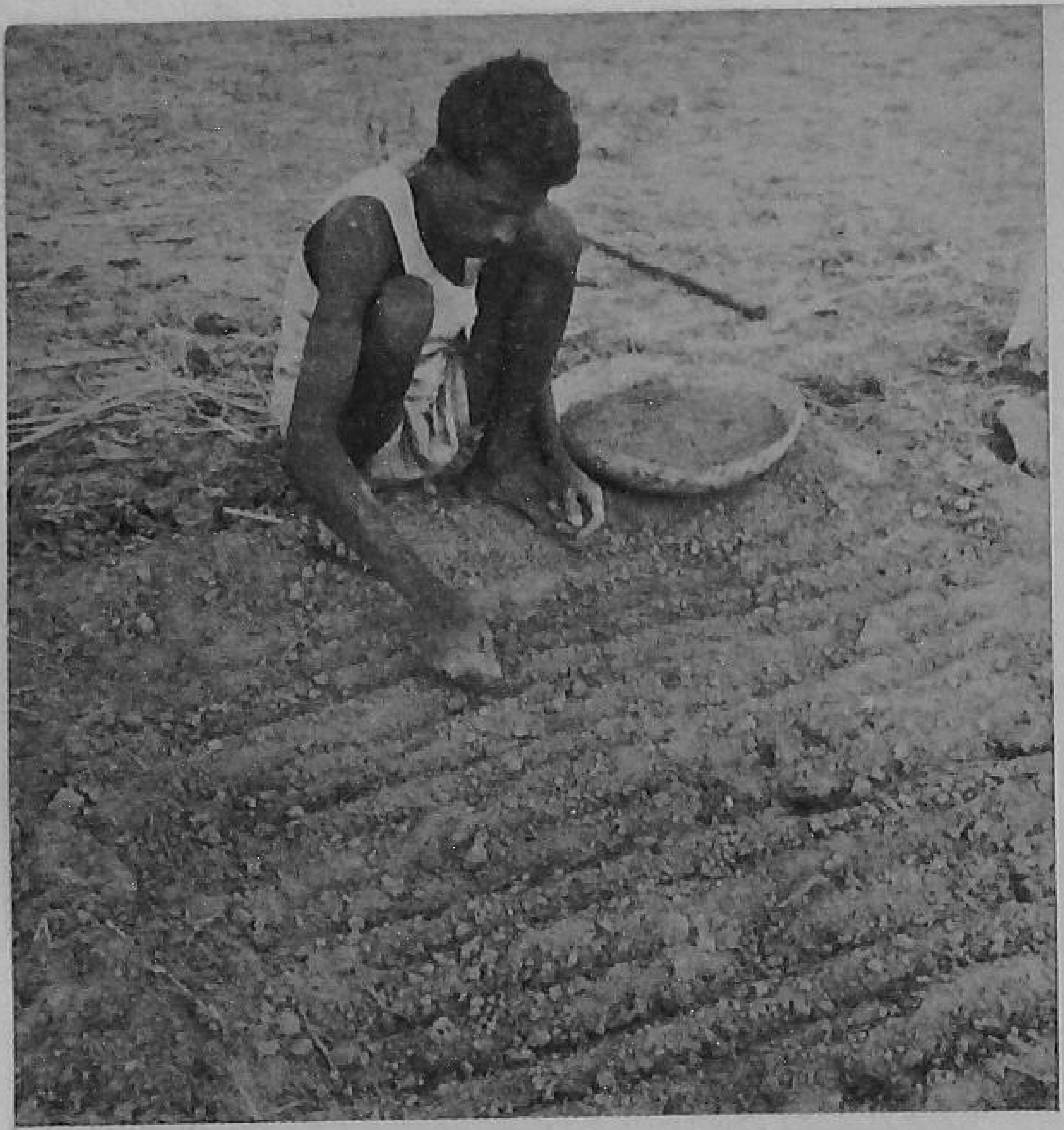


Prepare the seed-bed well

• Select a patch of land 24 feet by 12 feet close to a well. Dig the area a foot deep or plough thrice and remove all weeds. Pulverise the soil thoroughly.

Treat the seed with 'Agrosan G. N.' before sowing

• Spread 2 cartloads (40 maunds) of well-rotted powdered farmyard manure or sieved compost and mix thoroughly. Level the plot. Divide the area into eight plots of eight feet by five feet keeping a one-foot wide and nine inches deep channel for irrigation and for draining out water during rains.



Sow the seed in lines

• Draw lines 3 inches apart and one-third inch deep in the beds.

• Take eight ounces of 'Patna Early' or 'Pusa Katki' seed in a piece of thick cloth. Mix one basket of ash and a pinch of 'Agrosan G.N.' (1 part for 500 parts of seed) with it by shaking. Pour the mixture in a basket.

• Sow in lines. Cover the seed gently with the help of a wooden plank or by hand.

• Provide shade to the seed-bed with straw thatching or *sirki*. If

Cover the seed with earth after sowing

Provide shade for the seedlings

Seedlings ready for transplanting

shade is not provided for raising early cualiflower seedlings, they will take two more weeks to become ready for transplanting. Shading promotes quick growth and saves time.

- Apply water gently just to soak the beds upto four inches. Do not flood them. Irrigate at an interval of five to seven days, but only when the first half an inch of soil dries up.

- In four week's time one inch high healthy seedlings with three to four leaves can be lifted and transplanted. Seedlings from these eight beds will be sufficient to plant an acre.

MAKE THE FERTILIZER WORK FOR YOUR RICE

By M. V. VACHHANI

THERE is a way of making the fertilizer you apply to rice give much better results than it normally does.

Most of our rice farmers use ammonium sulphate for their rice crop at 100 to 150 pounds per acre. This much fertilizer increases the grain yield by 300 to 500 pounds per acre. Most of them apply this fertilizer in one dose. This way, much of the nitrogen in fertilizer is lost, and the rice plants do not fully make use of what is available.

To get the best results from the fertilizer, apply ammonium sulphate in two or three doses (two for a short-duration crop and three for a long-duration one). Apply the first at planting, the second a month later,

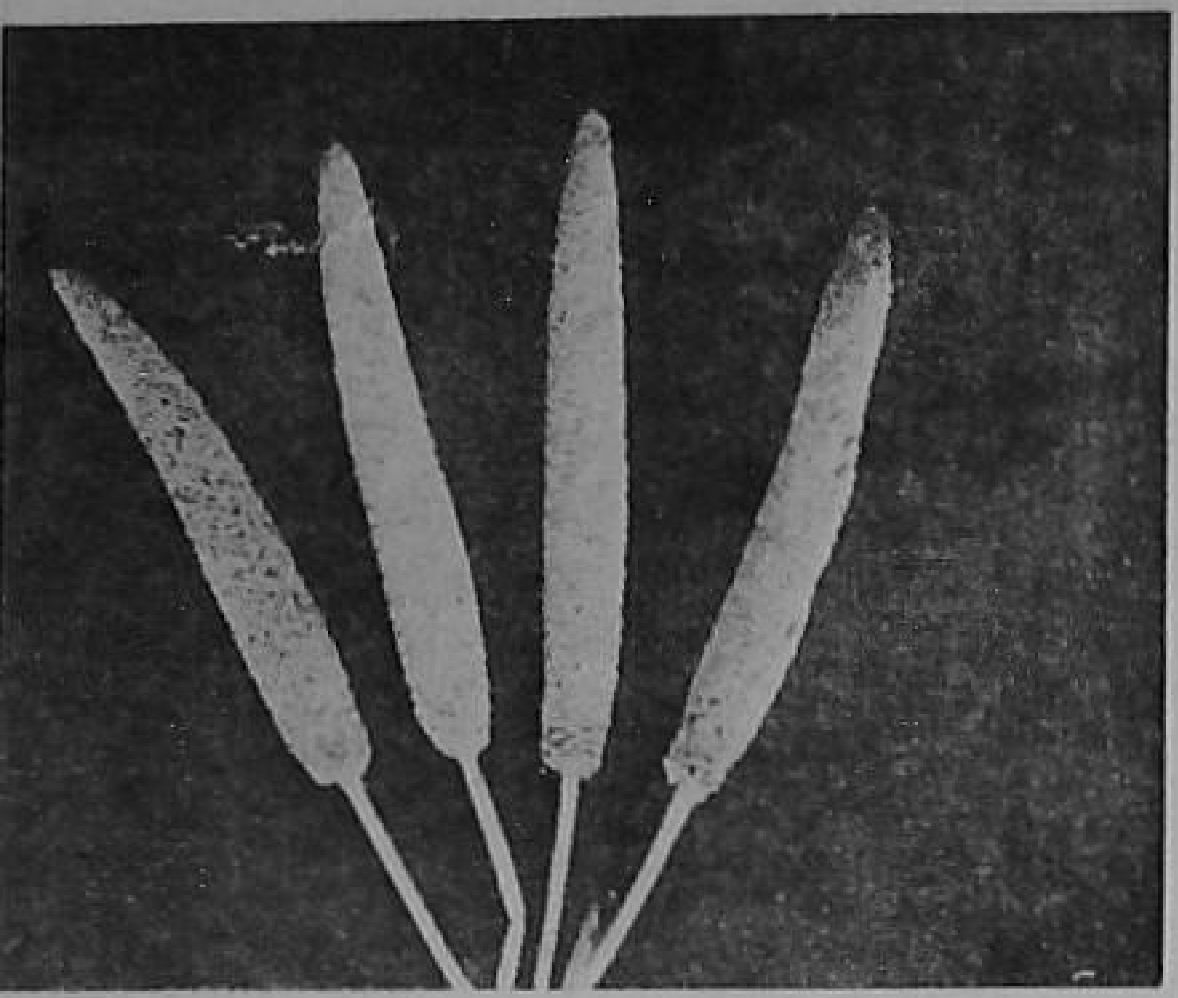
and the third two to three weeks before flowering starts. This way, nitrogen is available to the plants when they can use it best during their active growth periods.

Many farmers apply the fertilizer as a top-dressing by spreading it on the soil surface. To get more yield, the fertilizer should be placed two to three inches under the soil surface. This you do by applying it to the field just before puddling, and then mixing it thoroughly with the soil. This is for the basal dose. For the second and third doses, make balls of the fertilizer by mixing it with soil (in the proportion of 1:10) and moistening it. Press these balls down near the roots of the plants.

If you are using a Japanese paddy weeder, then spread the fertilizer between rows and work the implement so that the fertilizer is thoroughly mixed with the soil.

This way, one hundred pounds of fertilizer will give as good results as 200 pounds of it just applied on the surface of the soil.

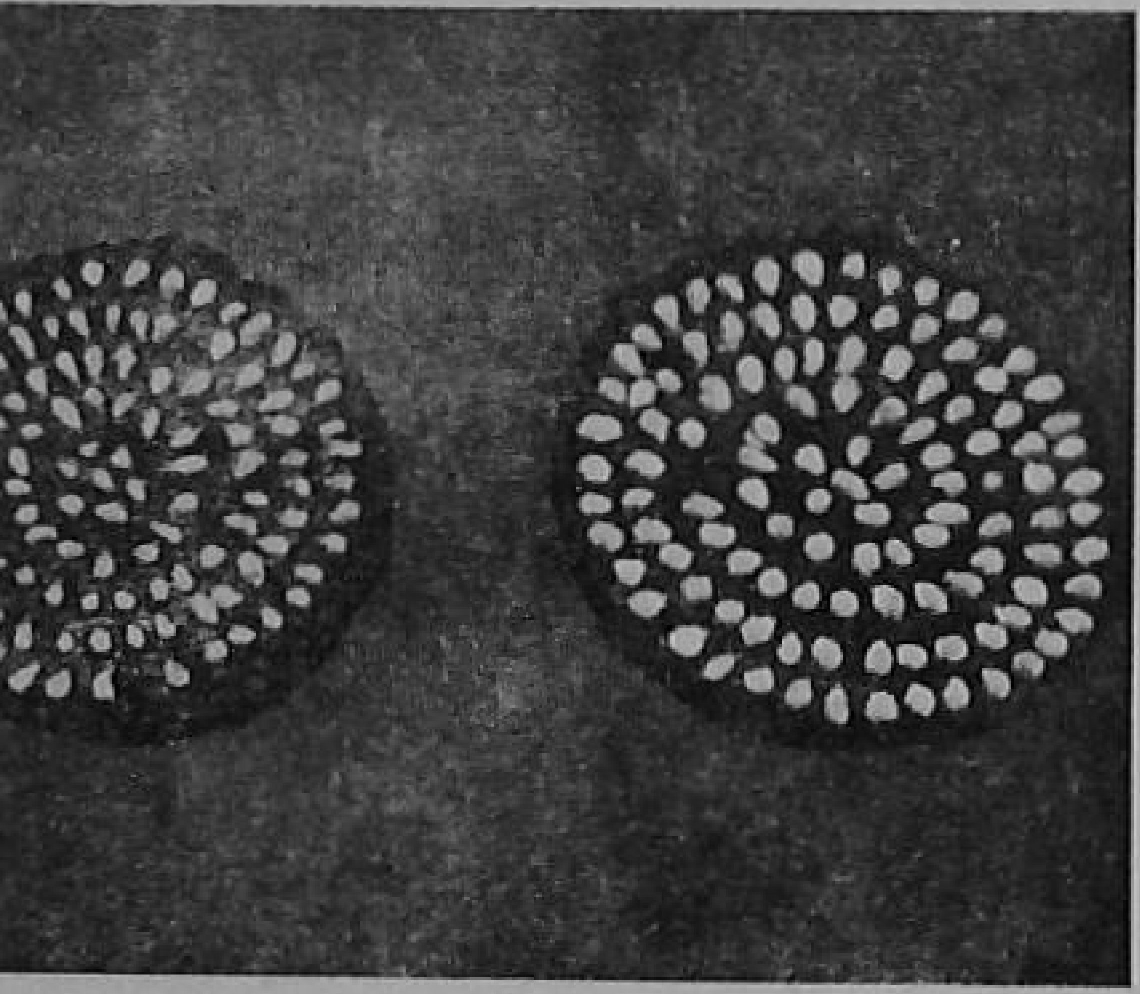
The fertilizer is being mixed with the soil after it has been spread in-between the crop rows



Matured cobs of 'Improved Ghana'

By A. R. KHAN and B. S. JOON

'IMPROVED GHANA' IMPRESSES FARMERS



rains from T. 55 (L) and Ghana (R) ; the
ld size and heavy weight of grains make
the difference between the old and the
new variety

A *bajra* variety, newly tried in the Delhi area, has impressed farmers. This *bajra*, which is called 'Improved Ghana,' was evolved by the Indian Agricultural Research Institute, New Delhi.

In the Delhi area, farmers grow *bajra* in 48,000 acres. It is an important *kharif* crop to the Delhi farmers. Like the adjoining areas of Rajasthan and south-west Punjab, *bajra* is grown here with insufficient and irregular rainfall. But unlike maize, *bajra* survives even on a small amount of rain. Hence, the farmers grow it as a stand-by crop.

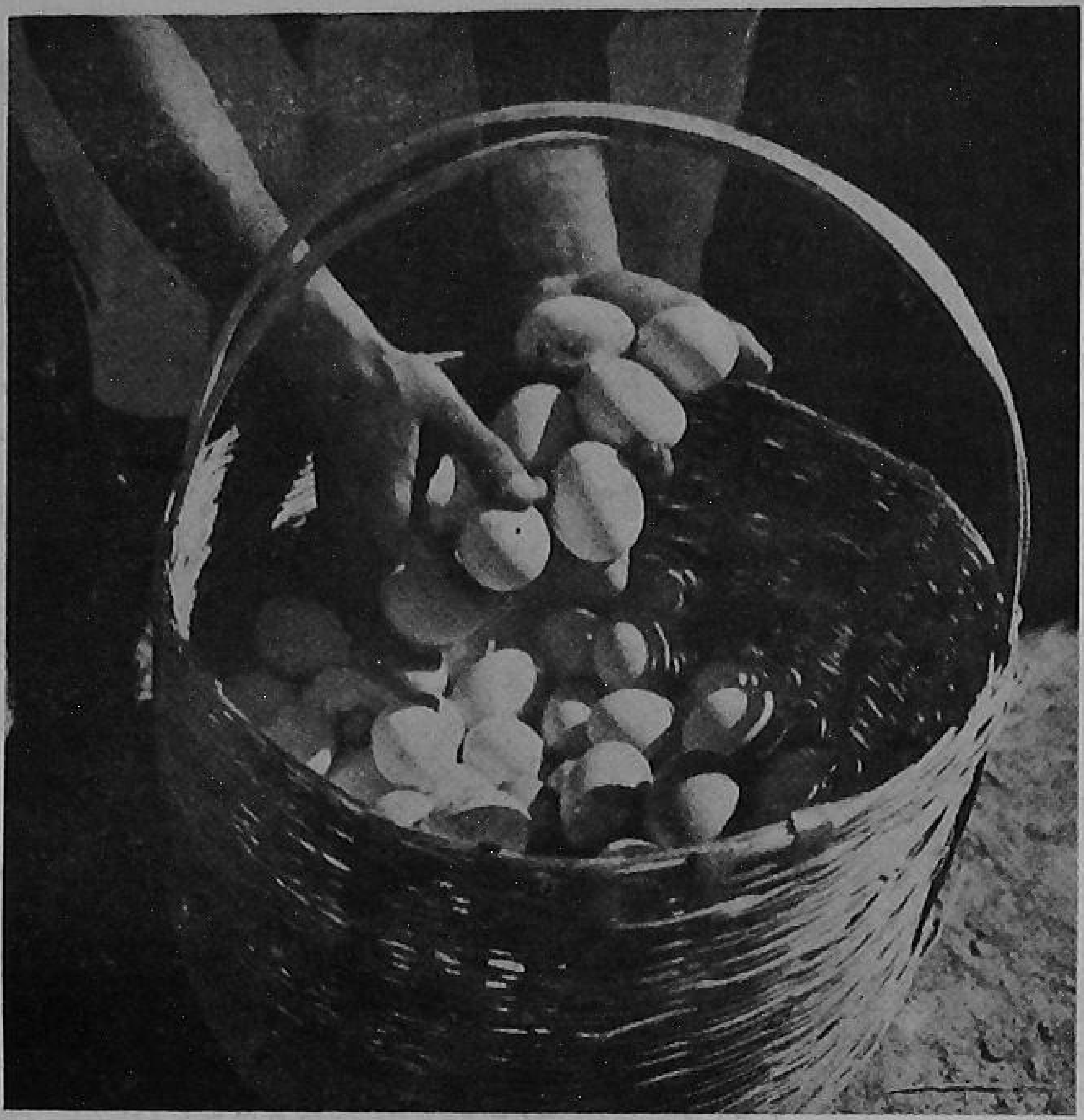
Some years back, a Punjab variety, Type 55, was introduced in this area. This has been a popular variety ever since. However, 'Improved Ghana' is now showing that it can do better than Type 55.

The new variety was selected out of a seed received from Ghana (Africa). The variety is fairly tall, matures early (taking 40 to 45 days to flower and 65 to 70 days to mature). It produces a good head with bold grains. Under rainfed conditions, it gives an average yield of 80 kilograms per acre.

Last *kharif*, this variety was tried in the Kanjhawla Block by the Indian Agricultural Institute, New Delhi. Heavy rains damaged the crop in almost all the places where it was tried. However, in 10 villages, the crop was not very much damaged and here its behaviour was studied. The Ghana variety gave about 23 per cent increase in grain-yield over Type 55.

The crop was not very impressive at the beginning, but as the ears came out, it started showing up. Increase in yield, the farmers found, was due to the bold size and heavier weight of the grains.

In all the villages where this variety was tried, there has been a good demand for its seed. It looks as if 'Improved Ghana' is going to be the future *bajra* variety of this area.



To get more eggs and better eggs you must look after your laying birds well

HOW TO MAKE MORE MONEY WITH YOUR LAYING BIRDS

By S. G. IYER

POULTRY keepers who know how to manage their laying flocks are getting good profits from them. They follow some simple rules as a part of flock management. With these simple rules it should be possible for you to get more money from the birds you keep.

The first rule you should follow is to remove growing chickens, just before they start laying eggs to laying houses. See that your flock is even in size and, if possible, consists of birds from the same batch that was hatched. Never mix young pullets with older birds. If you mix them you will always have to face trouble from worms, lice and ticks.

The most common number of birds in a breeding pen is ten. But in the case of laying birds, you can put 50 to 100 birds per pen.

If you are keeping one breed only, you can have free range for them. Because there is no fence in this system, the birds will pick up worms, grass and fallen grains and thus add to the feed given. Here, you construct the houses far apart, so that too many birds may not collect in any of the houses. If you follow this system, you have to take care of attacks from animals also. The birds may lay eggs away from the house. As such, this system is not very good to follow, especially if your poultry farm is near a city.

The other system is the semi-intensive one. Here, you confine the birds in fenced runs and hence they are well-protected. However, take care not to overcrowd the birds. The safe rule is to keep

200 birds per acre or 20 square yards' space per bird. It is good to have two runs, so that periodically you can shift the birds from one run to the other.

The third system, which is getting more popular today is the intensive one. Here, the birds are confined in permanently built houses all the time, on a layer of deep litter on the floor. It is necessary here to provide the birds with all the feeds they need, including Vitamin D3. In the West, this system is widely followed for what is called broiler production and also for commercial egg production. A floor area of four square feet per bird is provided in this system.

The intensive system saves labour and land, and helps better production and freedom from parasites.

Some poultry keepers keep birds in small cages, each measuring 15 inches by 15 inches by 18 inches. This is known as the battery system. Pullets kept in such batteries for 10 to 12 months are more tender in the flesh and hence fetch a better price in the market. Where land is not easily available, you can follow this system in a small way, if you want to produce your own table eggs.

—Keeping birds in a fenced run is a good practice, provided you do not overcrowd them

HATCHING

The time of hatching is important if you want more profits from the flock. Normally, egg production goes down in September-October; egg prices go up. The low egg production is because of the moulting of the older birds and the young birds not coming into production at the time. If you are a commercial egg producer, you should aim to get the maximum number of eggs during this period, so that you can get high prices.

The birds which are hatched from November to February, start laying quickly and through the summer and early autumn. It will be good to arrange hatching on various dates, so that a good number of birds come to lay during the low egg production period.

MANAGEMENT

Keep these rules in mind in managing your laying flock.

Provide a balanced ration for the birds to eat as much as they like and plenty of good water to drink.

Examine the birds from time to time for lice, picks and other parasites. The moment you notice any of these, do not lose time in treating the birds. Separate out all ailing birds from the flock. Where you suspect infectious diseases, carefully examine the suspected birds and destroy them. Action at the right time will save endless trouble later.

BROODY BIRDS

Remove broody birds as early as you can. With many broody birds in a flock egg production will drop.

Broodiness is not a problem in light breeds like the Leghorn. But in heavy breeds like the Rhode Island or Australorp, many of the laying birds go broody.

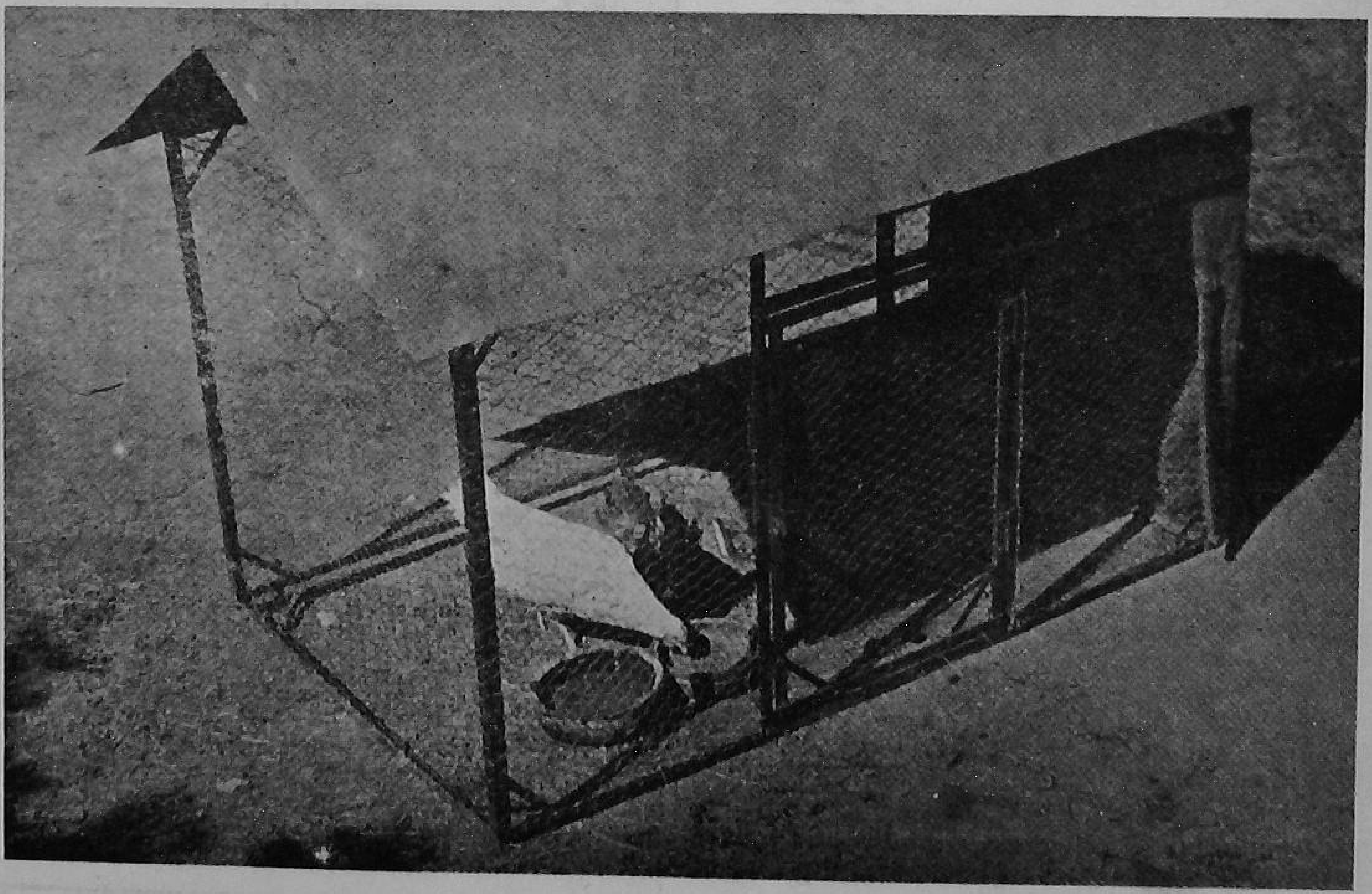
There is a way of bringing broody birds into production. Detect the broody birds early and put them in a broody coop or cage with wire or slatted floor so built as to prevent the birds nesting. In a week's time, the birds are cured of their broodiness. When they are in the cage, keep them well-supplied with food and water. After a week, transfer them back to their laying house.

Good birds come back into laying in 10 to 14 days from the time they start broodiness. Attack from parasites or allowing eggs to lie in the nests for long periods encourage broodiness. Houses and nests should be kept as cool as possible as hot weather encourages broodiness.

NESTS

To get clean eggs, provide enough nesting space for the birds. Such a nest should be fairly built, cool and well-ventilated and easy to clean. Provide a space of 15-inch square per nest. It should also be deep so that the eggs do not roll out.

If you have less space, you can rear the birds in cages ; but see that you provide all the food they need



Vaccinating the birds in time is one of the important rules in management practices

Most birds lay between 9 and 12 in the forenoon. Hence, it is good to provide one nest for every three laying birds. The nests should be also portable so that you can easily clean and disinfect them. Clean them once a year. Do not expose the nests to direct sun so that the birds may not get heat stroke. Also examine the nests for lice and ticks. Keep D.D.T. and B.H.C. powder handy for dusting if you notice any of these.

BIRDS IN MOULT

Poor layers moult their feathers early and slowly and take a long time to come into production. Good layers, on the other hand, moult rapidly and come back quickly into production. Birds, as a rule, moult five times during their growing period and after that once a year. In layers, moulting occurs after 10 to 12 months of laying.

We welcome your

QUESTIONS
and
SUGGESTIONS

Address them to

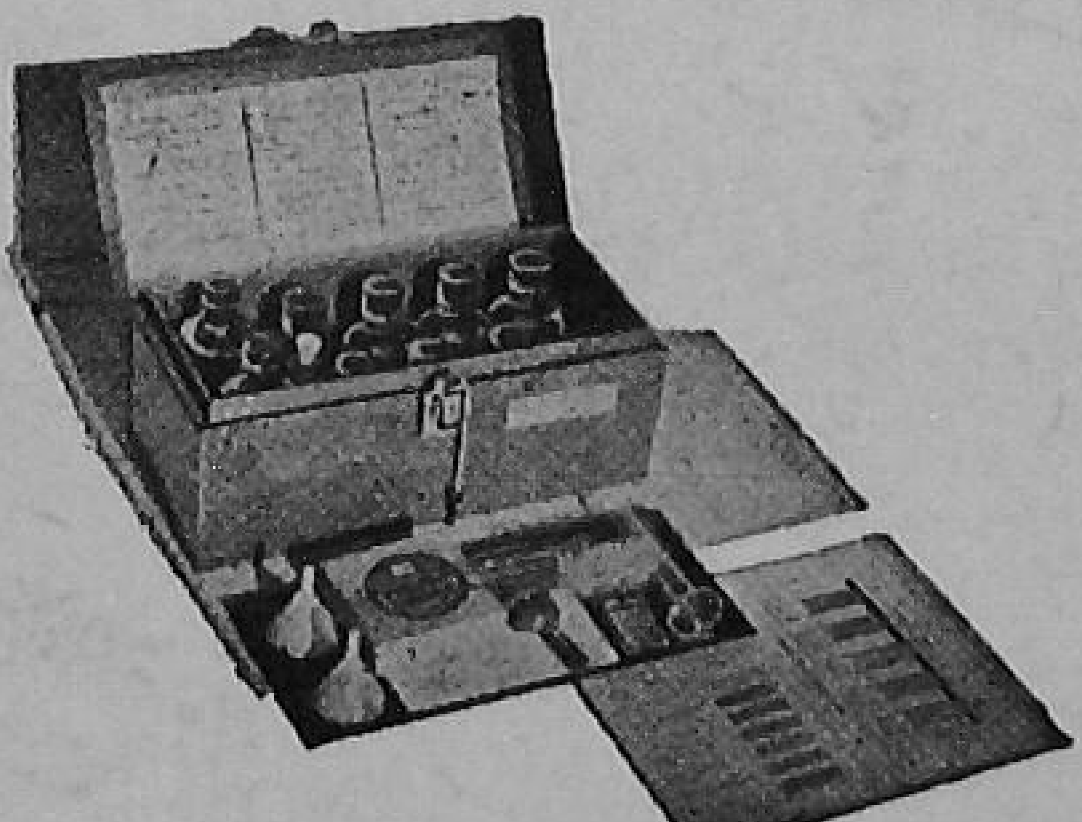
EDITOR

'EXTENSION'

Directorate of Extension
Ministry of Food and Agriculture
Krishi Bhavan

NEW DELHI

"GUNTI"
SOIL TESTING KIT



Containing 22 items in an attractive Sheet Metal box consisting of
Re-agents for determining:
SOIL RE-ACTION (pH) and estimation of available;
PHOSPHATES
NITRATES and
POTASSIUM in soils:
Also Available I.A.R.I. Type SOIL TESTING KIT

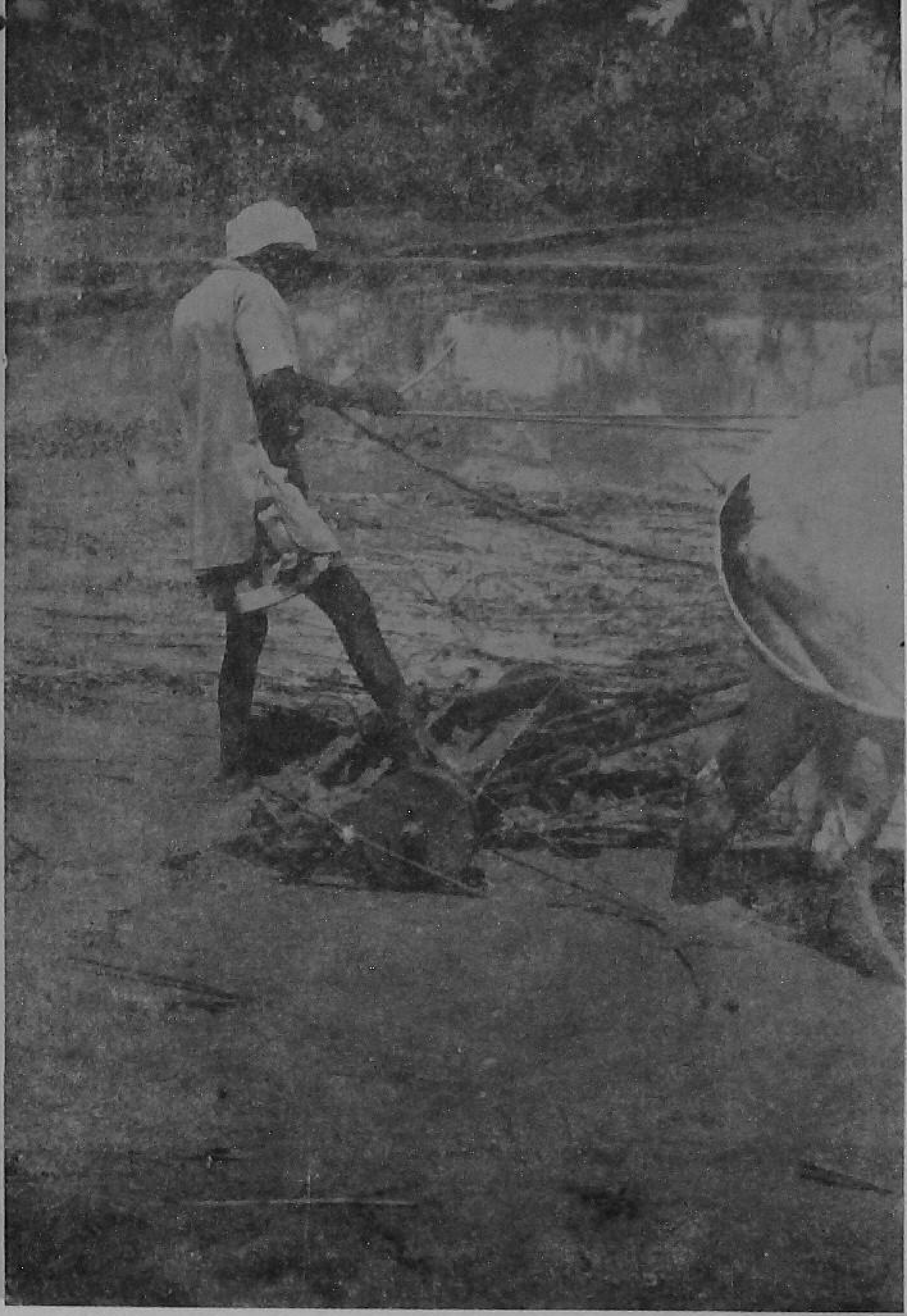
GUNTI & CO., PRIVATE LIMITED
128 Mahatma Gandhi Road North,
SECUNDERABAD-A.P.

PUDDLING WITH SATOON

By D. N. KHERDEKAR

MANY farmers in Madras State now puddle their fields with a satoon.

This implement is very popular in Burma where paddy is grown under similar conditions as in India. It consists of a three to four feet wide rectangular wooden frame mounted on two wooden wheels of about one foot diameter. Inside the frame, a wooden roller with steel knives is fixed. It rotates freely when the implement is worked. The implement is pulled by a pair of bullocks.



The field is being puddled with a satoon

Work a satoon in your paddy field instead of the last ploughing. The steel blades of the roller which rotates will make a fine puddle. You can puddle two acres in eight hours with this implement and save on time and money. You can also use it for trampling in green manure.

The satoon can be manufactured locally by your village artisan, and it will cost 40 to 60 rupees.

The Madras Department of Agriculture has designed an all-steel puddler on the lines of the satoon. It is available for 60 to 80 rupees.

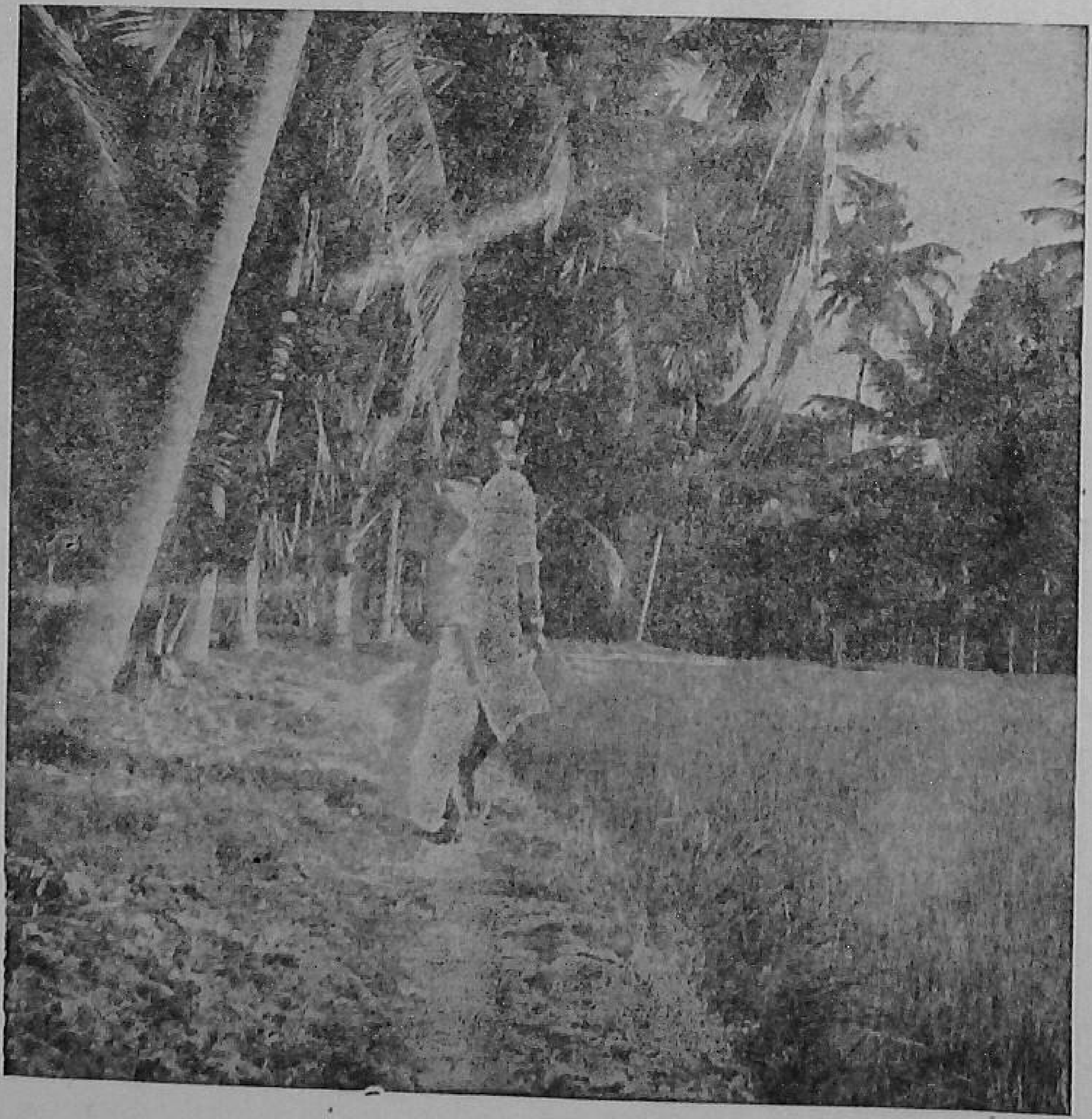
The secret of a 6,000-pound paddy crop

FARM yields can spiral up with due care of soil and crop, and without doing anything that is beyond the farmer's means. More and more farmers are now finding this to be true, even in the heavy rain-soaked and proverbially poor soils of the West Coast.

Shri R. Krishnan Nair is one such farmer who has been reaping heavy paddy harvests from the lateritic fields in Ulloor village near Trivandrum in Kerala.

His five acres of paddy land, typical of the coastal soil, till five years back used to yield but 1,500 pounds of paddy to the acre. Today, each field averages 6,000 pounds an

Personal attention pays in farming ; Shri Nair on one of his daily rounds of the farm



Among the improved implements he uses, the Japanese hoe is one. He uses this to weed and stir the soil in-between the plant rows

acre, and sometimes, in a good season, a harvest of 6,500 pounds in some of the fields does not evoke any surprise.

Nair credits the officers of the Agricultural Department for helping him know and follow the steps necessary in raising the averages to such a high level.

To work the soil better, he uses an iron plough in the place of the *desi* plough. The only other improved implement he uses is the Japanese hoe for weeding and stirring the soil between the paddy plant rows.

He uses the high-yielding *U.R. 19* and *P.T.B.4* paddy varieties in the place of the local ones—'the very first step in raising a better crop.'

He treats the seed with 'Agrosan G.N., before sowing and dips the seedlings in a copper fungicide before transplanting, so that the diseases don't get any entry into the planted crop.

Since the coastal soils loose their organic matter quickly and the cattle manure available to replace the same is not enough, Nair has found a good solution in glyricidia. This green manure plant planted in interspaces in the coconut garden and on the farm border, provides him with enough green leaf to supplement his cattle manure. He also supplies a hundredweight of paddy fertilizer mixture at the time of planting, half a hundredweight 30 days later, and another half a hundredweight 30 days before flowering.

Timely plant protection measure saves crop losses ; here the crop is being dusted to check the paddy enemies

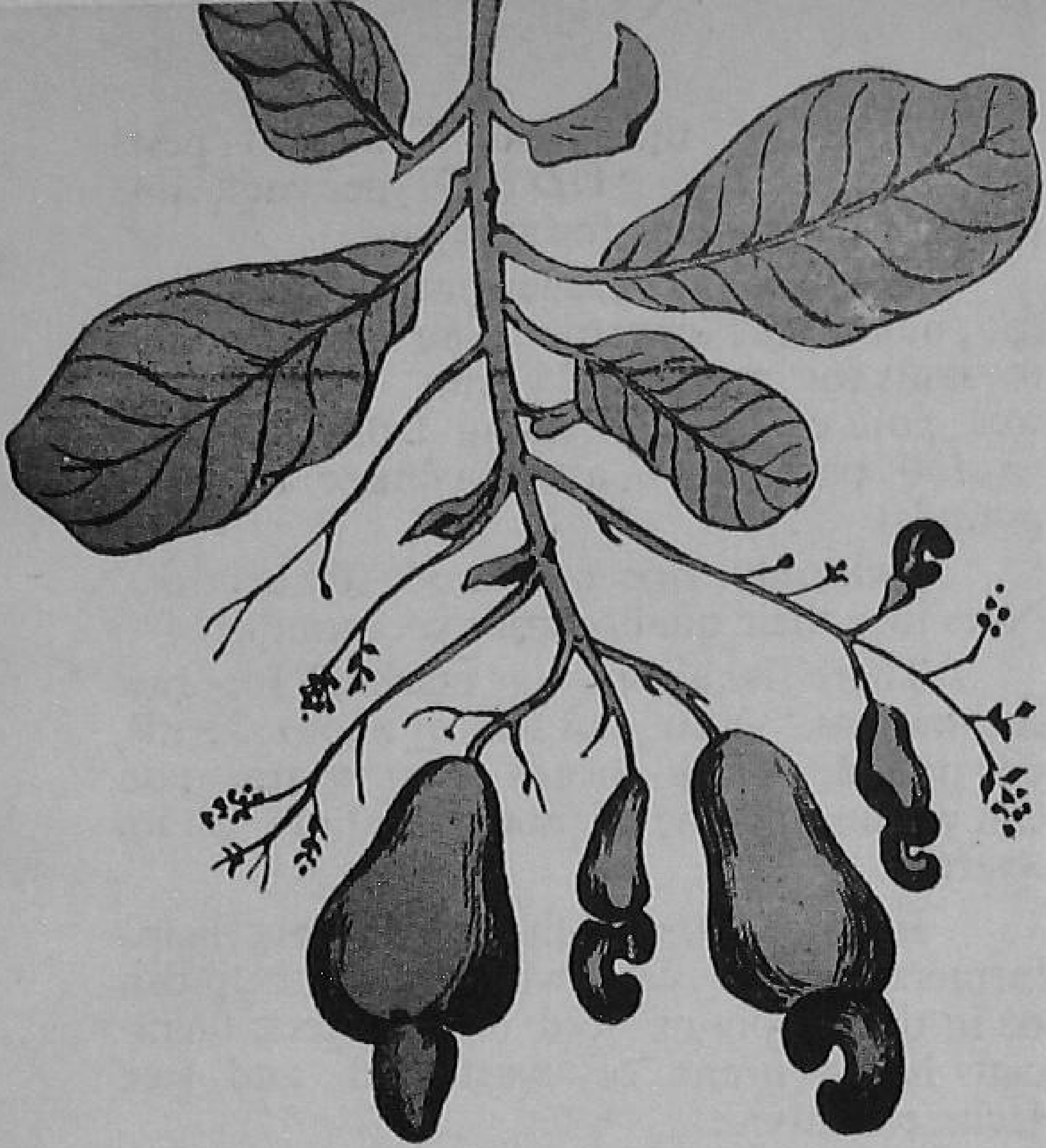
Planting in lines helps make weeding and stirring the soil with a rotary hoe very easy. It saves the labour cost too.

With this treatment, the soil has been giving him a uniformly high-yielding paddy crop.

Similar is Nair's experience with coconuts. His 500 coconut palms, due to neglect, used to produce 2 to 5 nuts per year per tree. Today, they are all yielding 50 to 60 nuts each.

Like paddy, the coconuts are producing this high yield because of good cultural operations and manuring. The glyricidia provides him sufficient manure to give 50 pounds of it to each tree. In addition, each tree gets 6 pounds of coconut-fertilizer mixture. The other thing he does to keep the palms producing well is the control measure he has undertaken for the rhinoceros beetle. The inexpensive beetle-hook is his weapon for the pest.

Nair admits, he is not a solitary example of how attention to soil and crop has raised crop yields very high. There are many like him, he says, in the village itself who produce equally good crops. And they too carefully tend the soil and the crop as Nair does.



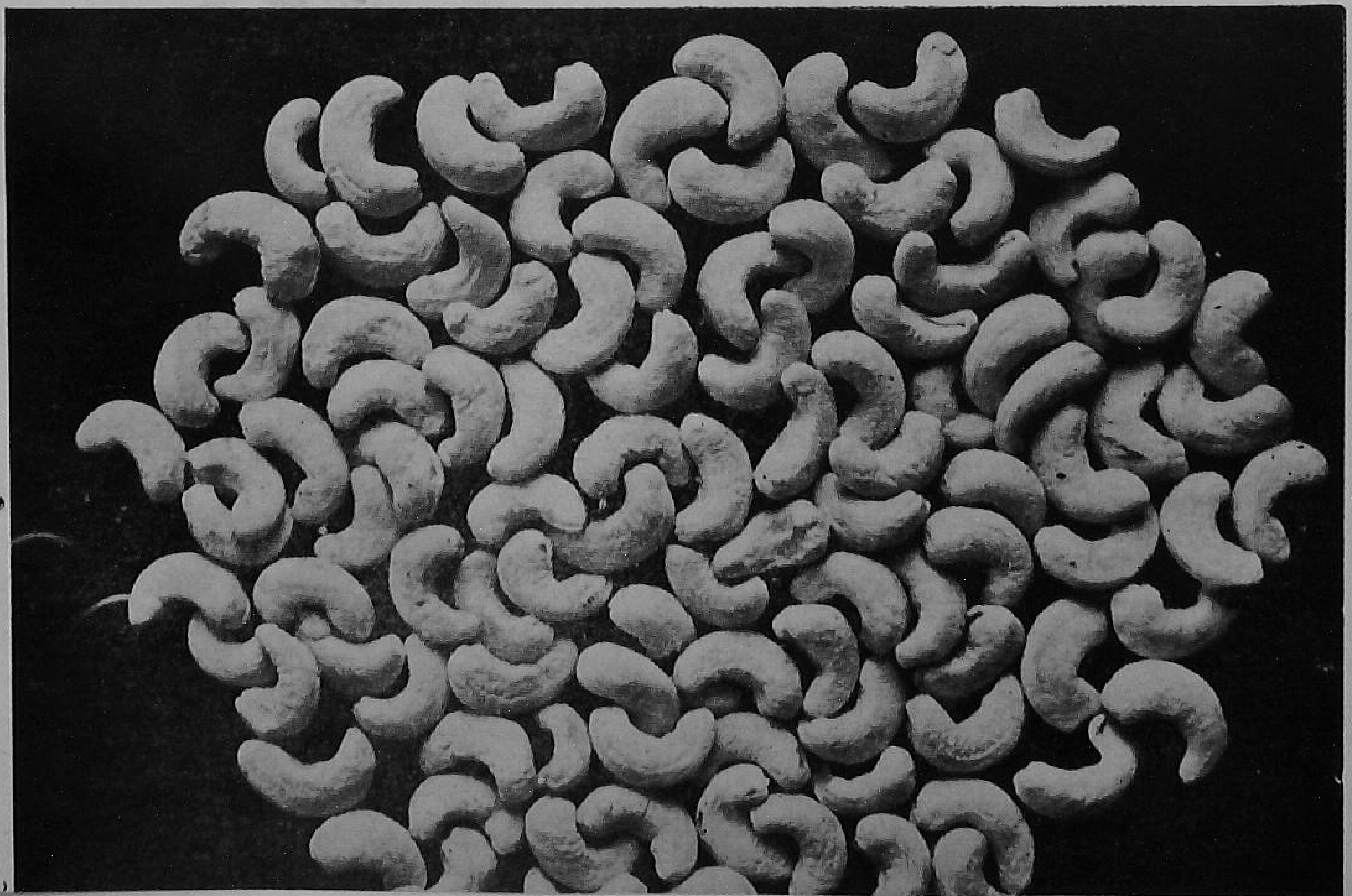
GROW cashewnut on your wasteland, and you will be getting a good, steady income from the land which never gave you anything back anytime before.

The cashewnut will come up in your wasteland if it is well-drained, and does not have the deep black cotton soil. The tree is hardy, and does very well for the little attention you give it.

We produce about 75,000 tons of raw cashewnuts in India a year. This is not enough, and we import a lakh ton of nuts per year to keep our cashew kernel industry busy.

Cashew kernels have a great overseas market. The kernel also is a rich and tasty food. The cashew shell oil, a valuable raw material, is in great demand in many industries. The cashew apple is rich in Vitamin C, and many tasty preparations can be made out of it.

Make your waste land pay



The cashewnut, when grown in waste-land, will not only provide a steady income, but will also be a good way of preventing soil erosion.

Remember these points when you grow cashewnut.

1. Plant 25 to 30 feet apart. You need 70 to 50 trees per acre.

2. It is better to raise seedlings in individual baskets and plant them rather than sow seeds directly in the field.

3. Air-layers of cashew are the best for planting.

4. Plant the seed or seedlings in pits of two feet cube, dug out and refilled with the dug out soil early in the season. Provide also catch pits three feet apart on the upper levels of your land to conserve moisture. Put a good fence around the area.

5. Support the plant with a stick. Mulch around the plant every year.

6. Manuring will increase yield. Give one pound of ammonium sulphate and one pound of superphosphate per tree per year.

7. Take timely steps against pests and diseases. Use DDT 50 per cent, one pound in 20 gallons for spraying.

You will find cashewnut yielding from the fourth year onwards. The tree continues to fruit for another 25 years. From each tree you can get anything from a pound to 150 pounds of nuts (average being 8 pounds).

Pick only ripe nuts and sell in time. Nuts lose their quality after six months.

There is always a market for raw cashewnuts. You can sell at about 35 nP. per pound, which means from a tree you can get an income of about 2.80 nP. on an average.

In some states, the government helps farmers to grow cashewnut. Such help can be in the supply of seed or air-layers, financial helps, grant of wasteland and free technical advice.

Ask the Cashewnut Development Officer of your state or the Agricultural Officer for any help that you need in growing cashewnut.

---

keep your poultry in good health

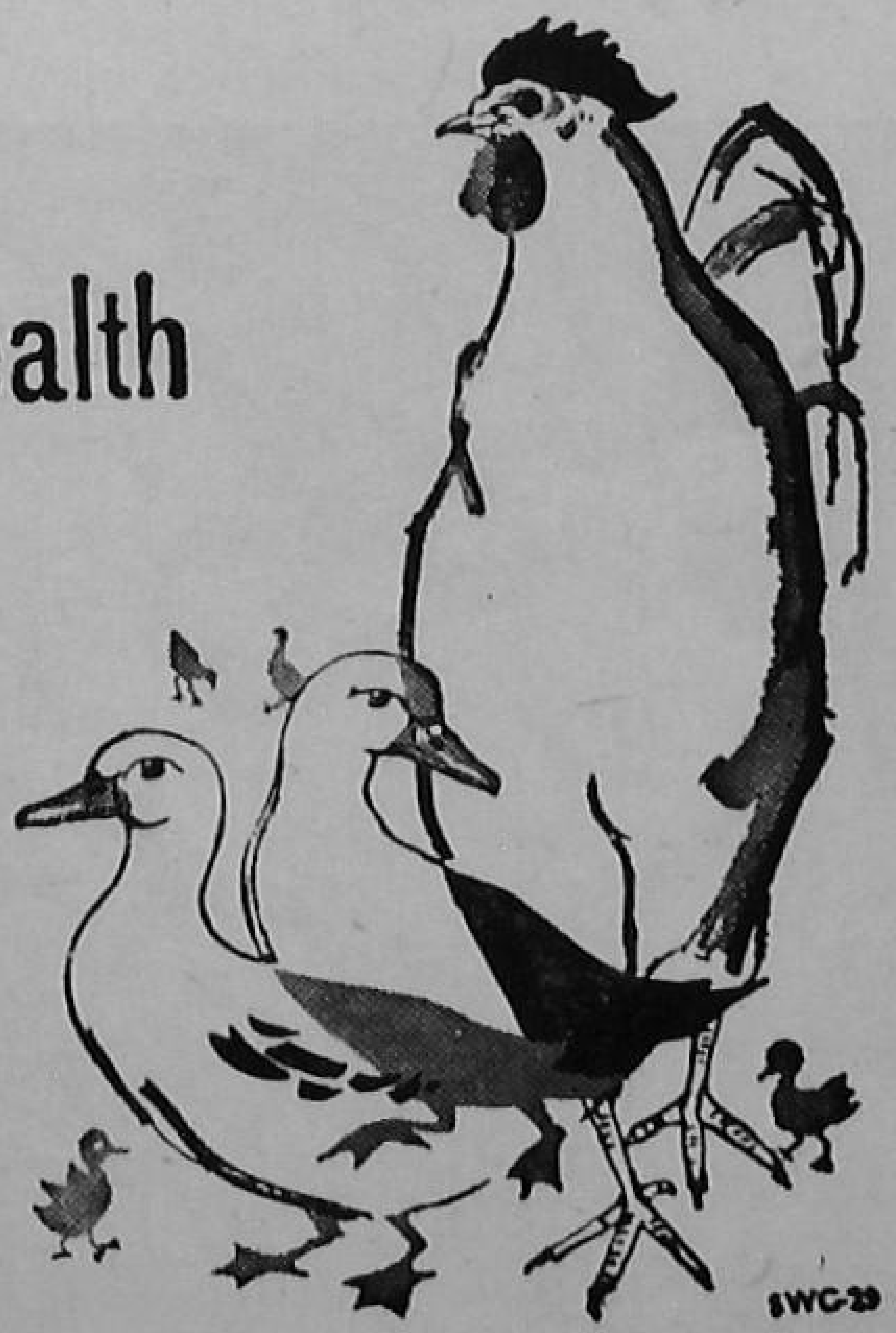
Keep your poultry in good health and promote growth and egg production with 'Star' Brand Poultry Mineral Supplement which contains essential minerals and vitamins such as Calcium, Phosphorous, Manganese, Vitamins A, B_2, D_3 etc. which are often deficient in poultry foods.

The addition of only 3% of 'Star' Brand Mineral Supplement to poultry feeds will produce a product conforming in mineral and vitamin contents to Indian Standards Institution specifications.

STAR BRAND

SHAW WALLACE & CO. LTD.

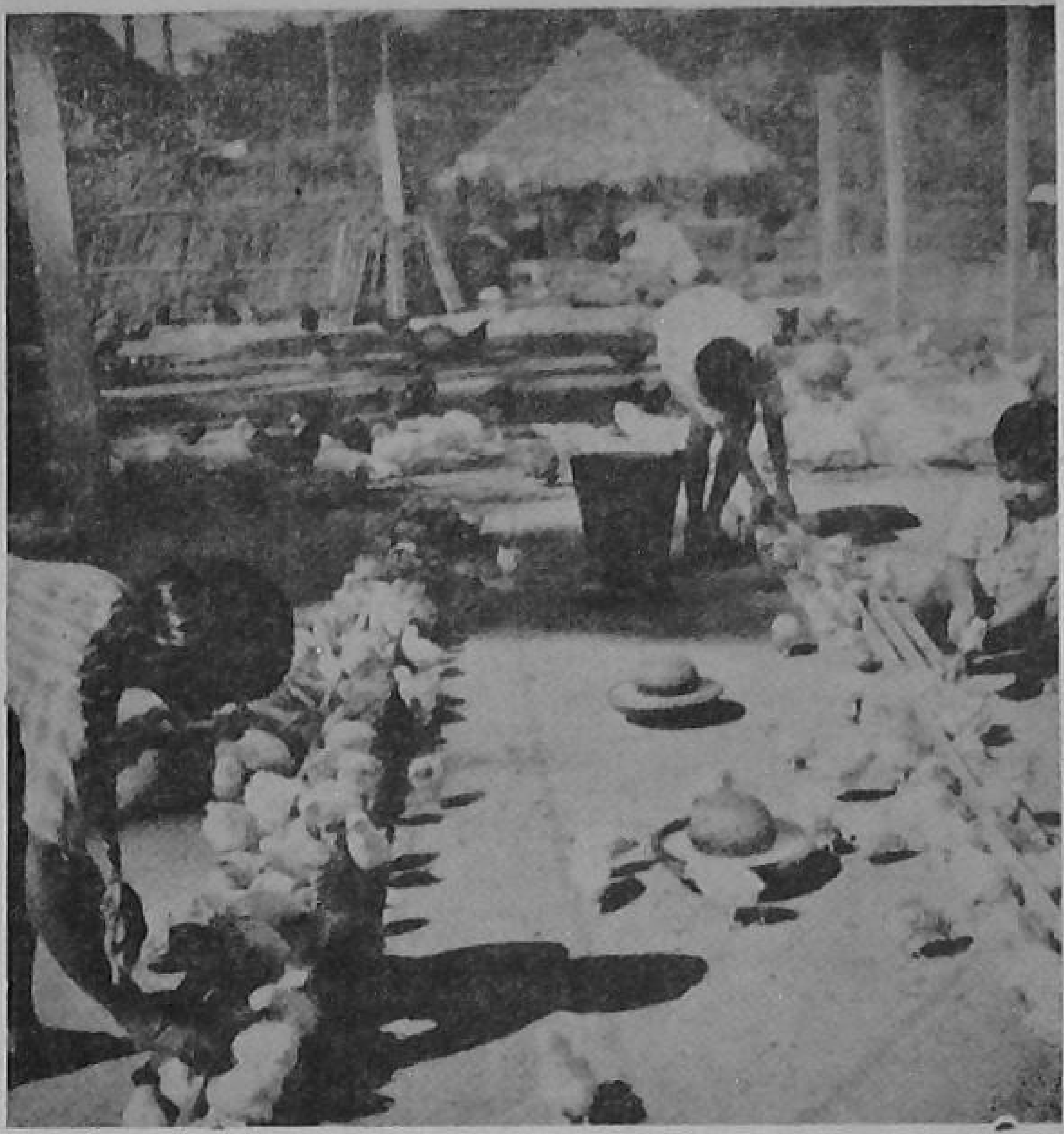
Calcutta Madras Bombay New Delhi



gram. In such a house the birds feel comfor table, especially during the rainy season and seldom remain idle. It is also cool inside during the hot summer days. Fresh quantities of bedding materials are spread in the house regularly in layers. The whole litter is removed once in four to six months and is sold as manure.

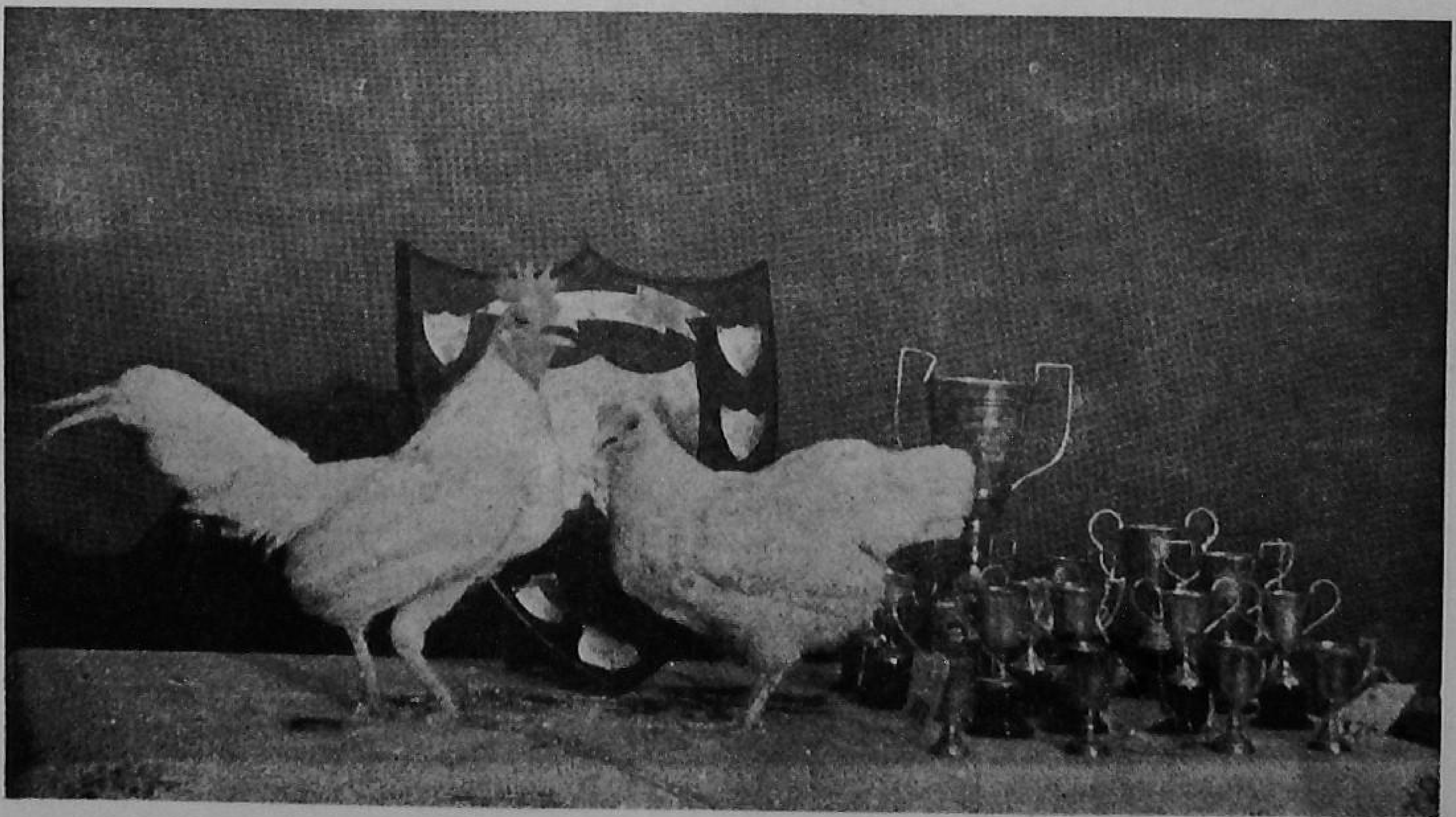
Krishnamurthy knows the benefit of vaccinating his birds against diseases like Ranikhet and fowl pox. Last year, nearly 300 birds of his farm were attacked with fowl paralysis. He had no time to go and call the Veterinary Doctor or the Poultry Specialist. His own experience in poultry keeping and the knowledge he acquired by studying the subject, provided him with the solution. He rushed to the local medical practitioner and got Vitamin B complex tablets. He made a solution of these tablets and administered it to the birds, and saved them all.

Krishnamurthy is now helping many a young poultry farmer set up poultry farms.

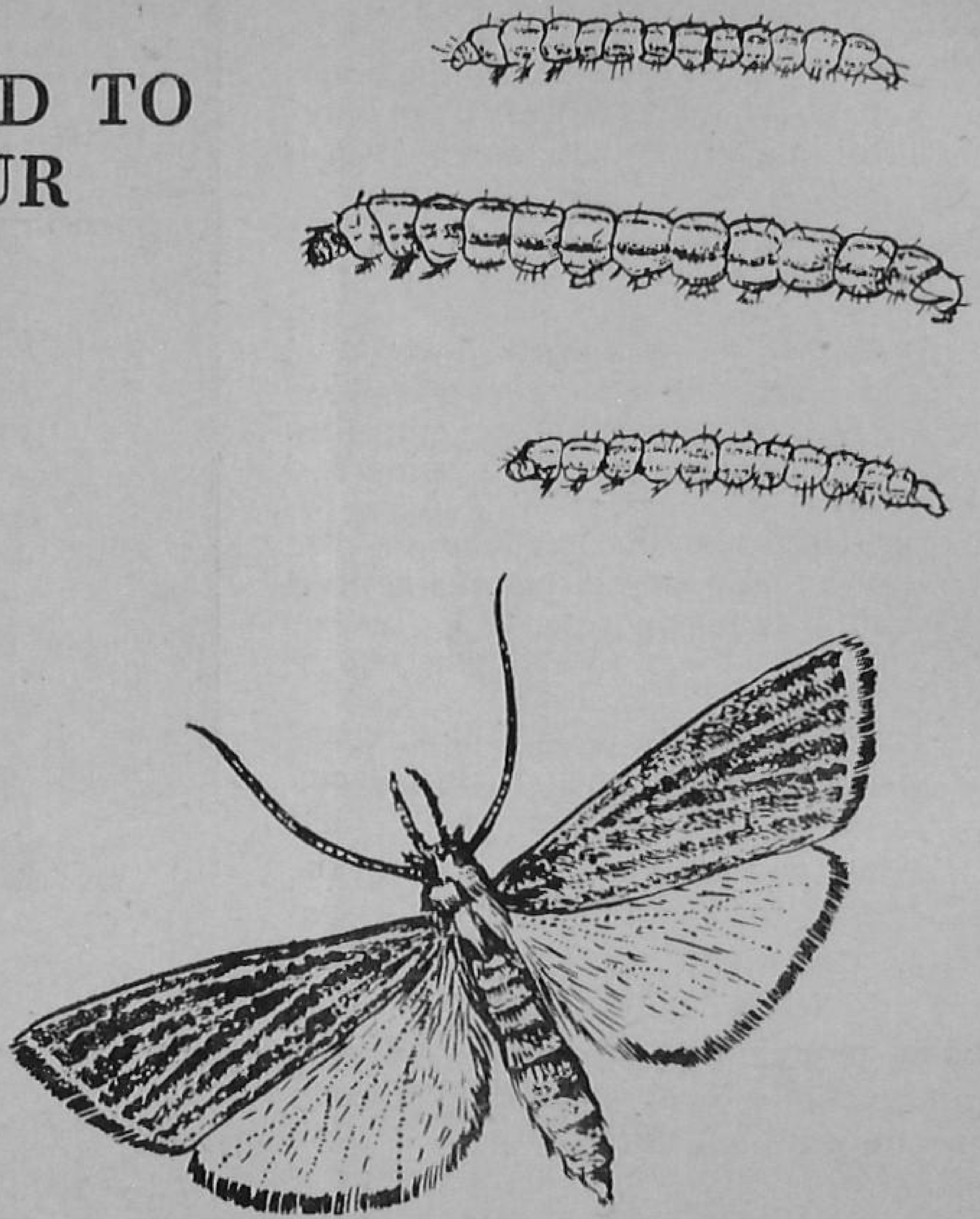


He provides a balanced ration to his birds ; his childr who help him in his work are seen feeding the birds

Here are two of his prize-winning birds along with a few trophies



TIME TO ATTEND TO GURDASPUR BORER



Caterpillars and a moth of Gurdaspur borer

THIS is the time the Gurdaspur borer appears on your sugarcane, and the time to get rid of this serious pest of sugarcane.

The only effective way of doing it is to cut the affected canes close to the soil and to destroy them by burning.

The usual practice of spraying of insecticides is of no use against this pest, as it remains inside the canes. It may even keep itself hidden in the setts meant for the next year's sowing.

The Gurdaspur borer has caused a heavy loss to the Punjab and Uttar Pradesh sugarcane farms.

It must be mentioned that one or two farmers taking the necessary steps to control

the pest in a village is not enough. All farmers should join in this attack against the borer. Then only it will be effective.

It is easy to find if the Gurdaspur borer is present on the crop. The attacked crop shows a blasted appearance with dried-up side leaves and a withered top.

The borer lays scale-like and transparent eggs on the upper side of the green leaves at the break of the monsoon.

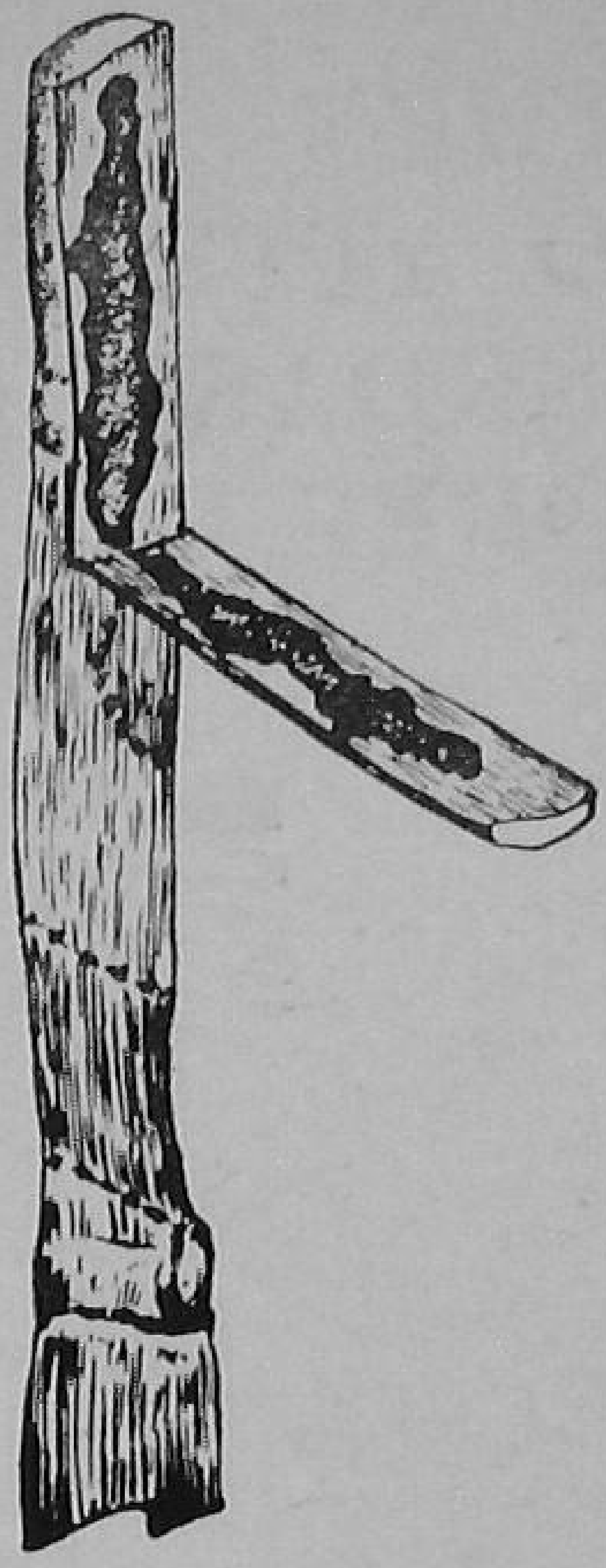
Eggs hatch and cream-coloured caterpillars with orange-coloured head and four reddish brown stripes all over come out.

These young caterpillars hide themselves inside the setts and damage them. They feed on and damage first the top and then the internodes. They begin from the portions below the bud and enter the tissues below the rind where they go on feeding, moving up in a spiral manner. After damaging about two to three internodes this way, they get into the softer layer by making a tunnel to feed on further.

Three days after the caterpillar attacks the crop, the tips start drying up. Six days later, the tops start withering, and a fortnight later the crop gets a blasted appearance. When this happens, the canes stop tillering.

Canes from such affected crop are hollow, soft, thin and short, and are unfit for crushing at the factory. As a result of the attack, fungus also develops, which makes the juice sour and dirty red in colour.

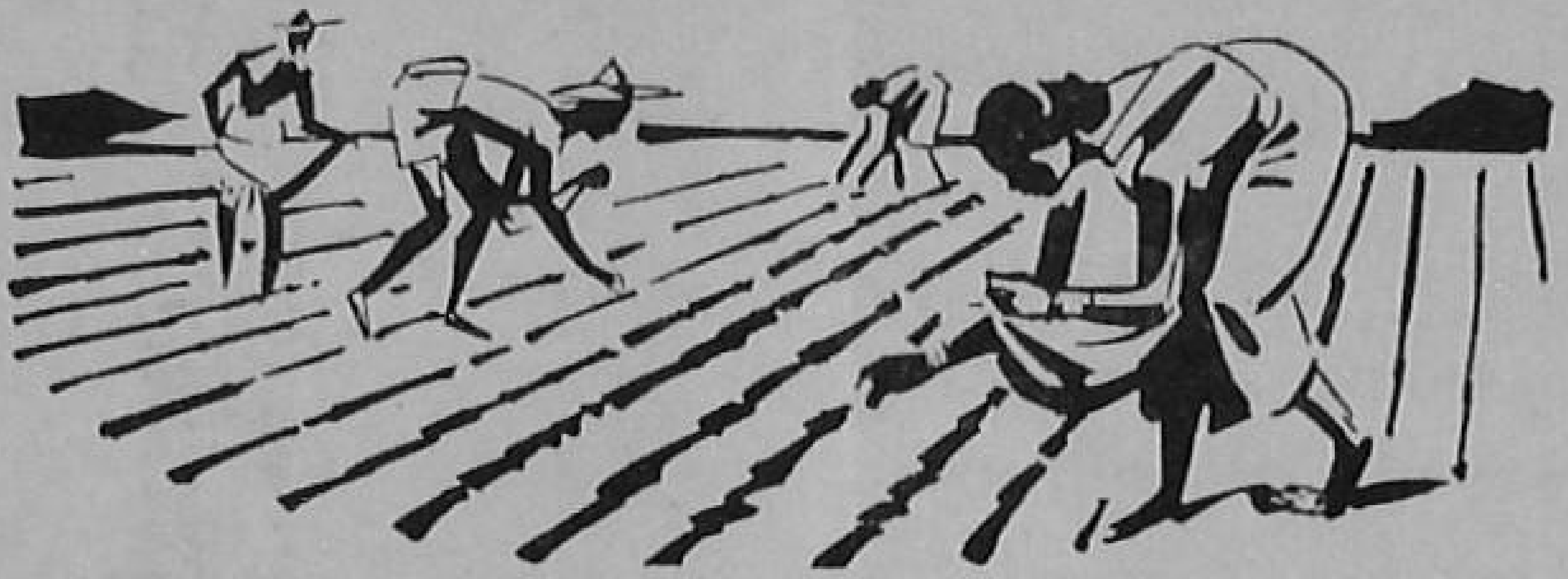
Apart from destroying the affected canes, you should take the following measures for controlling the pest.



A tunnel made inside the cane by the caterpillar

- Grow sugarcane varieties like Co.L.20, Co. 312, Co. 313.
- Grow a ratoon crop, as it resists the pest attack.
- Adopt a lower seed-rate and increase the space between the crop rows.
- Always get healthy seed and soak it in some suitable chemical solution before sowing.

Protect your crops from seed bed to harvest



For increased germination and for the control of seed borne diseases of Paddy, Jowar, Wheat, Jute, Cotton and Groundnuts, treat your seeds with

'AGROSAN' GN

Protect your crops from insect damage with

'GAMMEXANE'

formulations available in the form of 5% and 10% Dusts and 50% Water Dispersible Powder.

ICI

IMPERIAL CHEMICAL INDUSTRIES (INDIA) PRIVATE LTD.

Calcutta Bombay Madras New Delhi

Hints on PEPPER GROWING

PLANT ROOTED CUTTINGS

FARMERS and home-gardeners taking up pepper planting on their lands or homesteads during this July are advised to use rooted cuttings instead of any other planting material.

Rooted cuttings, being raised in sufficiently large numbers by the Departments of Agriculture in different states, are taken from high-yielding and bisexual vines, and will give a regular and high yield of pepper.

The rooted cuttings, when obtained, should be planted in 1-1/2 feet cube pits, spaced 12 feet apart, if you are raising a pure crop.

Though planting can be done from July to September in the pepper areas, best results are obtained with July planting.

MANURE THE PEPPER WELL

If you want to have a good harvest from pepper you must manure it well. Here is a well-tried formula for manuring pepper which is being recommended by pepper experts to the growers.

Apply a basketful of cattle manure or compost per vine before the break of the south-west monsoon, with two ounces of ammonium sulphate along with it. Follow by four ounces of groundnut cake.

Just after the south-west monsoon, apply four ounces of sulphate or muriate of potash.

Just before the north-east monsoon, apply another four ounces of groundnut cake and four ounces of superphosphate or bonemeal.

Every alternate year, give each vine four ounces of slaked lime.

The manures and fertilizers, excepting for slaked lime, should be applied a foot away from the stem of the vine, all round within a radius of two to five feet. They can be applied nearer the stem for young plants and further away from it for older plants.

Apply ammonium sulphate and potash as top-dressing and the others at a depth of six inches in the soil. Slaked lime can be applied closer to the vine, but should be well-mixed with the soil. If it is applied in the non-rainy season it is necessary to water the vines after application.

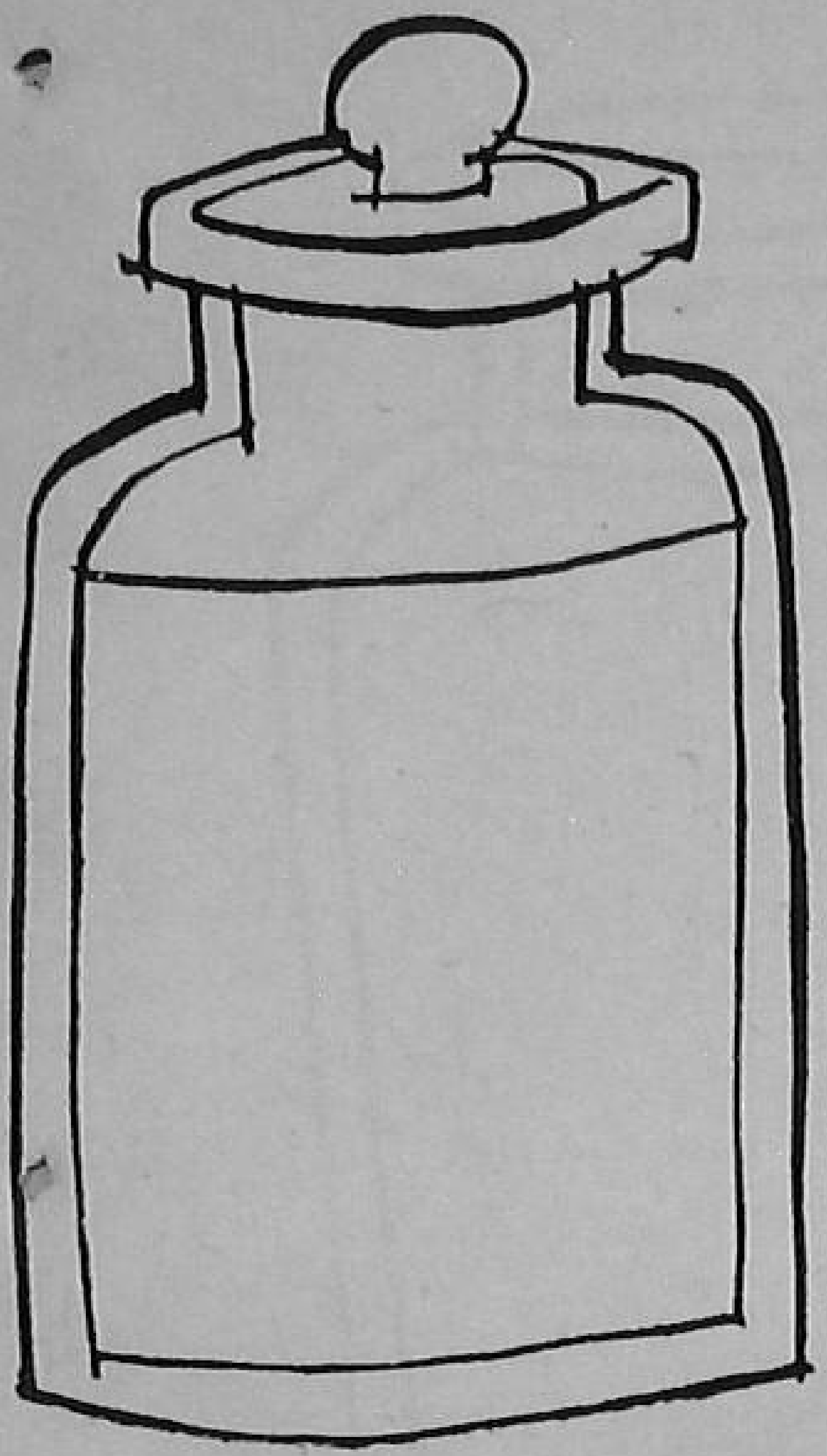
Mango when you order

THERE is one way you can taste mangoes all the year round: preserve mangoes when they are in plenty. Here are some preparations which you can try this season.

DRIED MANGO SLICES

Wash firm unripe fruits with water; peel the fruit with a stainless steel knife, cut it in

MANGO PRESERVE AND CANDY



An excellent preserve and a candy can be prepared from raw mangoes. After peeling, cut fruits in small pieces ; for candy use whole fruits. Prick them with a stainless pricker and dip them in four per cent salt solution for 24 hours.

Take one seer of sugar for one seer of fruit. Make syrup with two seers of water. Boil slices in syrup for ten minutes. Keep slices in syrup overnight. Boil the syrup two to three times the next day. Pour out the syrup on slices ; keep them overnight. Repeat this every day till the syrup reaches a consistency of honey. Allow it to stand for three days. Then boil slices for 15 minutes in the concentrated syrup. Now the preserve is ready.

For candy, consistency of the syrup may be further increased by boiling the slices for ten minutes more in concentrated syrup. Cover slices or whole fruits in dry sugar and pack in sterilized containers.

MANGO JELLY

Excellent jelly can be prepared from two to six-week-old fruits. After washing, peel fruits and cut them into pieces. Boil in water (1½ times the quantity) for 30 minutes. Strain the juice through a thick cloth.

Recipe is:

Juice	1 seer
Sugar	3/4 seer
Citric acid	1 gram

Add sugar and citric acid to the juice; (if the juice is too acidic no acid is added) put it on fire till it boils. Cool it down and fill in sterilized bottles. Jelly will set within 24 hours.

By R. K. SHUKLA

small pieces, and throw away the stones. To prevent browning, dip them in two per cent solution of common salt for 15 minutes. Keep the slices in the strong sun and dry them completely. Pack in dry containers.

MANGO CHUTNEY

Wash raw fruits and peel them. Dip in two per cent salt solution to prevent browning. Grate fruits with a stainless steel grate. Recipe is:

Mango slices	1 seer
Sugar	1 seer
Salt (finely ground)	3/4 *chhatack*
Red chillies (finely ground)	1/4 *chhatack*
Spices (Ginger, Cumin, Cardamom, Cinnamon powder)	1 *tola* each
Onion and garlic (finely chopped)	1/2 *chhatack*
Vinegar or 6 per cent acetic acid	2 *chhatack*

Now dip the slices in boiling water for five to eight minutes to make them soft. Drain out the water. Add sugar and salt to it. After 30 minutes put it on fire. Bag the spices, onion and garlic in a thin muslin cloth and put it in the boiling mixture. Heat it to a thick consistency. Squeeze out the spices by pressing it with two ladles. Add vinegar and cool it. Fill in sterilized containers.

MANGO PICKLES

There are many recipes of pickles. Here is one which is most common.

Peeled slices of under-ripe mangoes	1 seer
Salt	3 *chhatacks*
Red chilli (powder)	1/2 *chhatack*
Turmeric (*haldi*), Aniseed (*sauf*), Cloves (all powdered)	1/2 *chhatack* each
Fenugreek (*methi*)	1 *chhatack*
Mustard oil	4 *chhatack*

Now fry all spices in a little oil. Mix slices in these spices. Add salt, and keep them for two days in the sun. Place slices in another jar. Add oil just to cover the slices. Mango pickle will be ready within 15 days.

MANGO JAM

Mangoes from grafted trees are best for preparing jam. Select slightly ripened fruits and make slices after peeling. Crush the slices to make a thick paste. Recipe is as follows :

Mango juice	1 seer
Sugar	1 seer
Citric acid	1/2 tola

Add sugar and citric acid to the juice. After boiling cool the contents and fill in sterilized jars.

MANGO SQUASH

Fruits from seedling mango trees are best for squash. Squeeze out the ripe fruits to extract the juice. Recipe is as follows :

Mango juice	1 seer
Sugar	1½ seer
Citric acid	2 *tolas*
Water	2 seers
Potassium metabisulphite (Preservative)	2½ *masha*

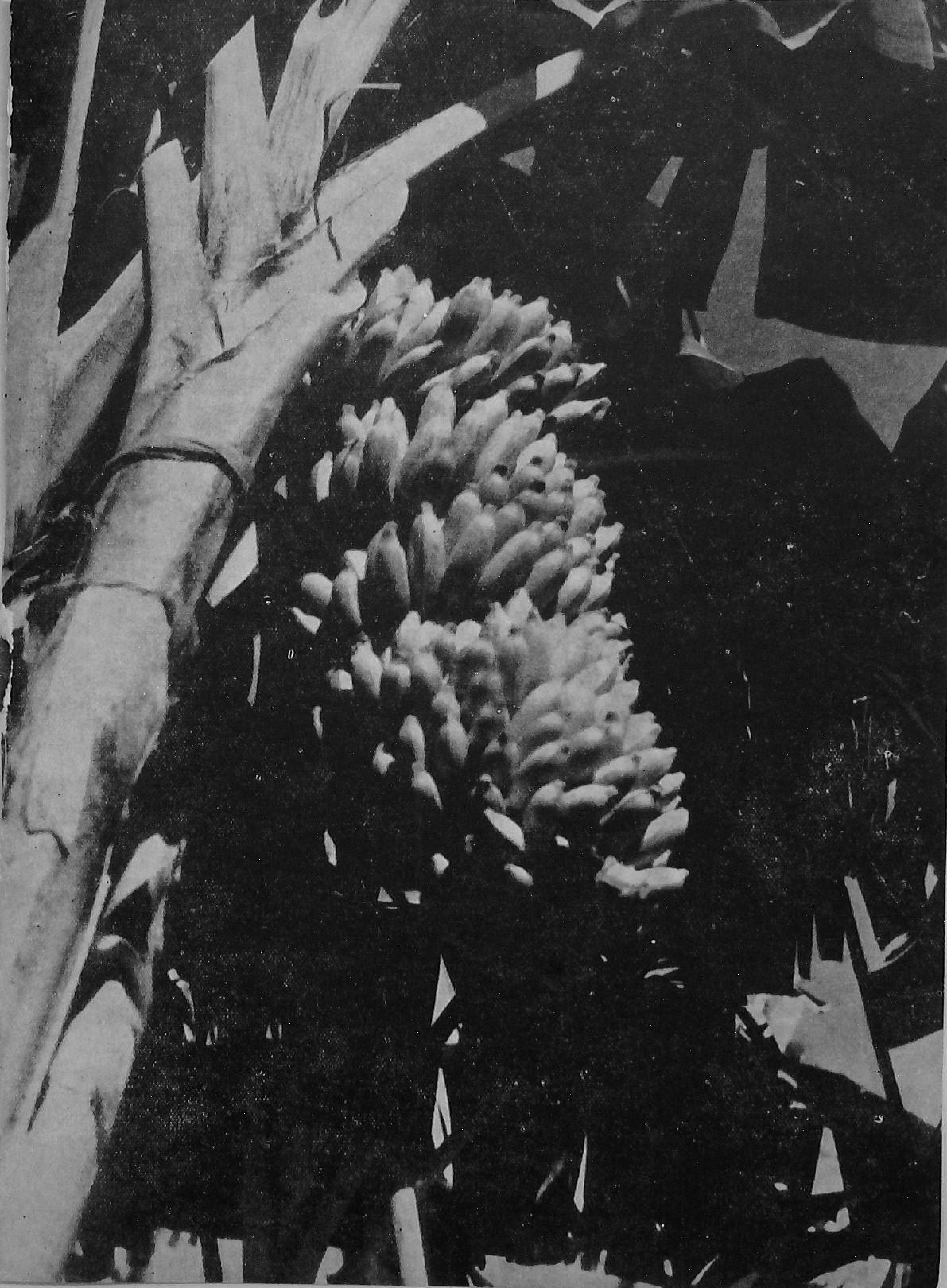
Make syrup of sugar and citric acid in water. Add juice to it and strain. Add preservative after dissolving it in a small quantity of water. Fill in sterilized bottles and cork them. Seal bottles by dipping in hot melted wax.

MANGO LEATHER

Wash well-ripened fruits of seedling mango trees. Extract the juice; strain it to remove fibres. Add potassium metabisulphite (two *mashas* for each seer of juice). Now spread the juice in thin layers on trays smeared with an edible vegetable oil. Place the trays in the sun for drying.

When the first layer dries up, spread another on the first one. Repeat this process till a 1/8 to 1/4 inch thick layer is formed. Cut it in small pieces; take them out of the trays and wrap in plastic paper. Pack in dry containers.

Published by the Farm Information Unit, Directorate of Extension, Ministry of Food and Agriculture, Krishi Bhavan, New Delhi, and printed at the Albion Press, Kashmere Gate, Delhi-6.



Regd. No. D-1180